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WATER SUPPLY OUTLOOK FOR WASHINGTON



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation
with Federal, State and private organizations listed inside the back cover of this report.

AS OF
FEB. 1, 1977

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SNOW COURSE MEASUREMENTS BY A SURVEY TEAM IN UTAH'S WASATCH RANGE.
ORC-254-10

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, 6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

R.M. DAVIS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

GALEN S. BRIDGE

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

JOHN A. BIGGS

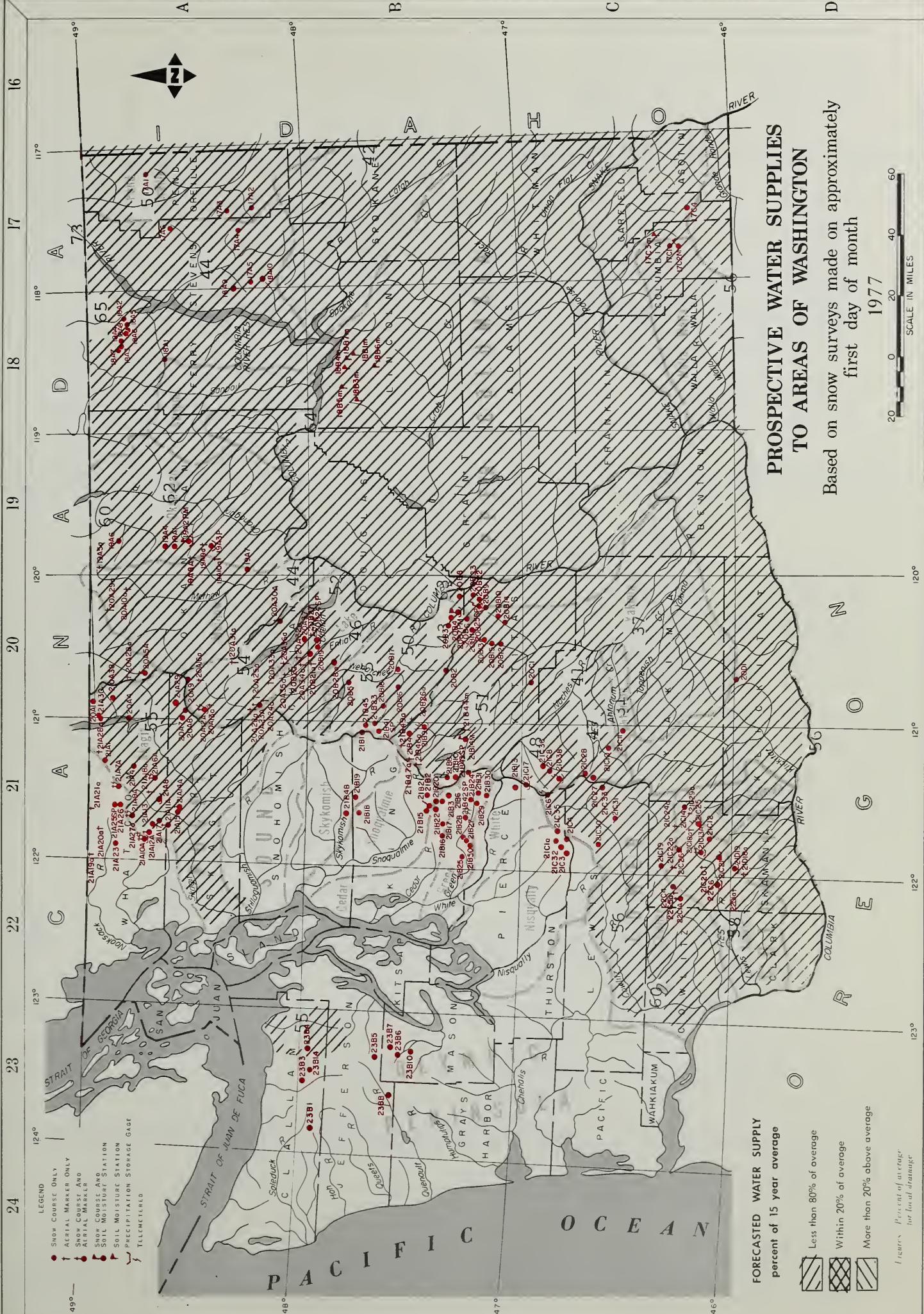
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

**ROBERT T. DAVIS, Snow Survey Supervisor
and**

NORINE P. KENT, Statistical Assistant

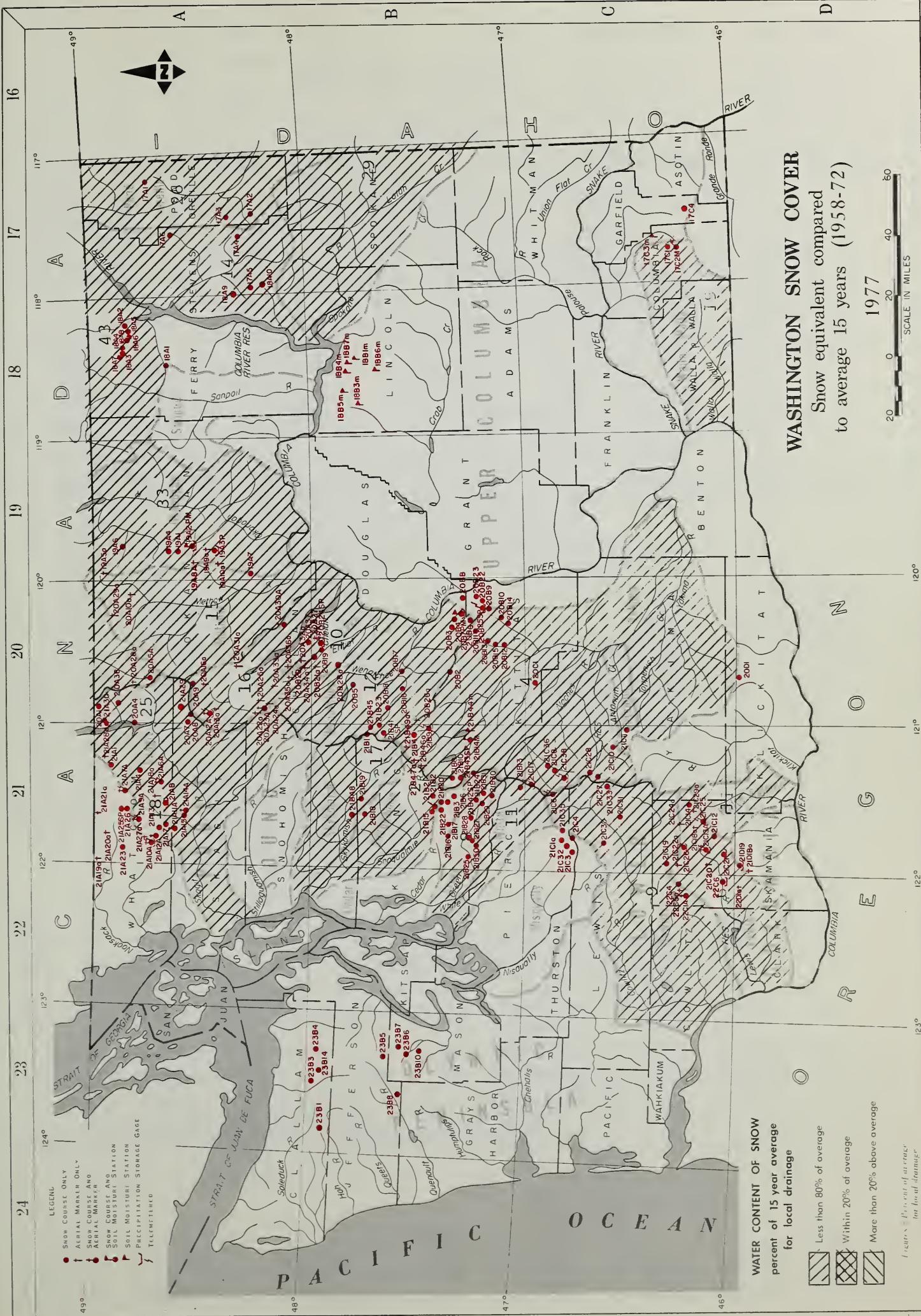
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE											
Pend Oreille River	17A2	* 31N	43E	S 250	5250	Trough #2	20B5S110	20N	40E	5310	Lewis River (continued)
Boyer Mountain	17A1	24	37N	44I	5000	Colockum Creek Upper	20B22	11	20N	5300	Divide Meadow
Yuncharsaw Meadow	17A3	30	35N	43I	2970	Colockum Creek, lower	20B23	1	20N	4300	Grand Meadow
Winchester Creek	17A3					Squilchuck Creek	20B3	12	21N	4400	Lone Pine Shelter
Boulder Road	18A2	36	39N	36I	1450	Beehive Springs	20B4	18	21N	3400	New Muddy River
Butte Creek	18A3	28	32N	35I	4070	Scoot-A-Vista	20B22	11	20N	5300	Olmian Pass
Cabin Creek	18A8	5	38N	36I	317	Jump-Off	20B8	34	21N	4450	Plains of Abraham
Gait Creek	18A4	26	39N	35I	355	Stemilt Creek	20B9	34	21N	4400	Smith Creek Road
Snow Gait Creek	18A5	3	38N	36I	2150	Scout-A-Vista	20B4	18	21N	3400	Spencer Meadow
Show Caps Trail	18A6	5	38N	36I	2723	Jump-Off	20B8	34	21N	4450	Surprise Lakes
Summit G. S.	18A7	20	39N	35I	4600	Stemilt Slide	20B9	30	21N	5000	Table Mountain
Upper Wheeler											
Baird	17A6	19	36N	42I	3215	Creston-kunz	1BB1m	32	27N	34I	2440
Carlson	18A9	34	32N	38I	2885	Jack Woods	1BB3m	28	27N	31I	2440
Chewelah Creek	17A4	11	32N	41I	1925	Krause	1BB4m	21	27N	33I	2420
Stranger Mountain	17A5	26	31N	38I	4990	Sheffels	1BB5m	18	27N	32I	2378
Togo	18A10	6	29N	38I	3370	Sherman	1BB7m	24	27N	33I	2440
Wheatridge											
Sherman Creek Pass	18A1	19	36N	35E	5550	Ahtanum R. S.	21C11	24	12N	14E	3100
Okanogan River											
Clark	19A8	2	36N	23I	7000	Big Boulder Creek	21B9	35	23N	14E	3200
Muckamuck	19A9	1	30	36S	24I	Bumping Lake	21C8	23	16N	12E	3450
Matton Creek No. 1	19A1	30	37S	24I	6750	Bumping Ridge	21C36	13	16N	12E	3400
Matton Creek No. 2	19A4	19	37N	24I	5700	Colockum Pass	21C58P	9	15N	12E	4600
Paysatten	19A2	20	38S	32	40N	18E	20B9	25	20N	20E	5370
Rusty Creek	19A3P	1B	35N	24I	4000	Cooke Creek	20B10	17	19N	20E	4123
Paysetten											
Salmon Meadow's	19A10a	15	35N	23E	6750	Demory Flat	21B84m	15	20N	14E	2200
Starvation Mtn.	19A6	30	39N	25E	2845	Fish Lake	21B84	28	24N	14E	3371
Tout's Coulee	19A7	36	34N	23E	4650	Green Lake	21C10	3	12N	13E	6000
Methow River											
Billy Goat Pass	20A10	10	38N	20I	6400	Grouse Camp	20B11	29	21N	19E	5385
Dollar Hatch	20A29a	B	39N	20E	7000	High Creek	20B12	34	20N	19E	2930
Harts Pass	20A5A	7	37N	18E	6500	Joe Lake	21B86a	22	23N	12E	4624
Horsehoe Basin	19A5a	15	40N	23E	7000	Lake Cle Elum	21B14N	15	20N	14E	2200
Loup Loup	19A7	36	34N	23E	4650	Tunnel Avenue	20B26a	19	23N	13E	5925
Chelan Lake Basin											
Cloudy Pass	20A22a	12	31N	15E	6500	Walters Flat	20B15	22	20N	19E	3360
Greenwood Flat	20A25a	3	31N	16E	3540	Wartus Lake	21B49a	12	23N	13E	3024
Little Meadows	20A24a	8	31N	16E	5275	White Pass (East Side)	21C28	2	13N	11E	4500
Lyman Lake	20A35a	12	31N	16E	5900	White Pass (Leach Lake)	21C27	1	13N	11E	4500
Park Creek Flat	20A31a	19	34N	16E	2220	Park Creek Ridge	20A12a	1B	34N	16E	4600
Petersons	20A16a	3	34N	16E	122	Petersons	20A9	21	35N	17E	3730
Rainy Pass	20A30a	32	31N	20E	6300	Rainy Pass	20A31a	34	33N	18E	5500
Safety Harbor	20A31a	34	33N	18E	6500	Trail Creek	20B14	20	19N	20F	3360
War Creek Pass	20B1a	10	2BN	18F	5425	Tunnel Avenue	20B26a	19	23N	13E	5925
Entiat River											
Blue Creek G.S.	20B19	54	2BN	19E	1600	Walters Flat	20B15	22	20N	19E	3360
Brief	20A33a	28	31N	17E	4540	Wartus Lake	21B49a	12	23N	13E	3024
Entiat Meadows	20A34a	2	29N	17E	3325	White Pass (East Side)	21C28	2	13N	11E	4500
Entiat River Trail	20A27a	15	2BN	19E	6800	Homestead	17C3m	2	9N	40E	3370
Four Mile Ridge	20A36a	17	30N	18E	6510	Martin Springs (Helmers SM)	17C2N	11	9N	40E	4030
Fox Camp	20B20	22	29N	18E	5540	Martin Springs (Helmers SM)	17C2N	23	9N	40E	4400
Pope Ridge	20A4SP	22	29N	18E	3540	North Fork Cedar	21B12	1	13N	11E	4500
Pope Ridge Snow Pillow	20A32a	34	30N	18E	6725	North Fork Cedar	21B12	1	13N	11E	4500
Pugh Ridge	20A37	20	29N	19E	6200	North Fork Cedar	21B12	1	13N	11E	4500
Shady Pass	20A35a	21	30N	17E	3910	North Fork Cedar	21B12	1	13N	10E	3000
Snow Brushy	20B1a	10	2BN	18E	4900	North Fork Cedar	21B12	1	13N	10E	3400
Tommy Creek						LOWER COLUMBIA DRAINAGE					
Wenatchee River											
Berne-Mill Creek	21B3	7	26N	15E	3170	White Salmon River	21C12	35	7N	BE	4000
Berne-Mill Creek (New)	21B18SP	13	26N	14E	3240	Cultus Creek	21B3	10	21N	10E	4030
Blewett Pass No. 2	20B2	.35	17E	4270	Mill Creek	21B28	26	40N	12E	3370	
Chiwaukum G. S.	20B16	4	25N	17E	1B10	City Cabin	21B21	33	22N	10E	3300
Lake Wenatchee R. S.	20B5	33	27N	17E	1970	Mt. Gardner Aux.	21B22	31	22N	10E	3500
Leavenworth R. S.	20B17	1	24N	17E	1127	Mt. Lindsey	21B16	31	22N	9E	2500
Merritt	20B1B	4	26N	16E	2140	Mt. Washington	21B15	22	22N	9E	3000
Calamity Ridge	20B1	14	26N	13E	2140	Rex River	21B17	11	21N	9E	2400
Council Pass	21B1	12	26S	19E	3700	South Fork Cedar	21B6	24	21N	10E	3000
Stevens Pass Sand Shed	21B4S	1	21N	10E	3400	Tinkham Creek	21B20	1	21N	10E	3400
Snoqualmie River											
Alpine Meadow	21B4B	31	22N	11E	3625	Snoqualmie River	21B1	14	28N	9W	3900
Alpine Meadows South Fork Tolt	21B2	19	22N	11E	26N		23B1	25	24N	7W	3900
Lewis River											
Blue Lake	21C22a	19	9N	BE	4800	Soleduuk River	23B1	31	29N	6W	4500
Pope Ridge	21C21	25	8N	7E	2200	Deer Park	23B4	1	2BN	5W	5200
Pugh Ridge	21B1a	8	SN	2500							
Shady Pass	21B1	26	21N	10E	4070						
Snow Brushy	21B1	24	21N	10E	4200						
Tommy Creek	21C1Ba	24	9N	9E	4200						
Skykomish River											
Lake Elizabeth	21B19	33	26N	10E	2900						

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Skagit River											
Beaver Creek Trail	21A4	35	39N	12L	2200	Beaver Creek	21C29a	21	9N	10E	5600
Beaver Pass	21A1	9	39N	12L	3680	Beaver Pass	21C25	28	8N	9E	3500
Brown Top	21A28a	26	40N	12L	6000	Brown Top	21C26	28	15N	10E	3800
Devels Park	20A4	34	38N	12L	5900	Devels Park	21C25a	36	15N	10E	3200
Freezeout Creek Trail	20A19	22	6N	7E	5500	Freezeout Creek Trail	21C26	36	15N	10E	3100
Granite Creek	21A29	25	36N	11E	5300	Granite Creek	21C27	31	37N	11E	5300
Grass Meadow New	21A3	17	38N	11E	5400	Grass Meadow New	21C28	17	37N	11E	5400
Grass Meadow Cabins	20A28	29	36N	11E	5100	Grass Meadow Cabins	21C29	29	37N	11E	5100
New Ibozomeen Lake	21A20	16	8N	7E	1900	New Ibozomeen Lake	21C30	14	40N	14E	2800
Thunder Basin	21A30	10	35N	14I	4200	Thunder Basin	21C31	36	37N	14I	4200
Baker River											
Baker Pass	21A27a	1	37N	7L	4900	Baker Pass	21C27a	1	37N	7L	4900
Dock Botte	21A1A	8	36N	BE	3800	Dock Botte	21C28a	28	15N	10E	3800
Easy Pass	21A7A	39N	39N	11E	5200	Easy Pass	21C32	28	15N	10E	5200
Jasper Pass	21A6A	17	38N	11E	5400	Jasper Pass	21C33	21	37N	11E	5400
Komo Kalishan	21A17	31	37N	9L	800	Komo Kalishan	21C33	23	38N	10L	800
Marion Lake	21A1B	27	38N	10L	3400	Marion Lake	21C34	27	38N	10L	3400
Mount Blum	21A12A	20	37N	10L	5800	Mount Blum	21C34	20	37N	10L	5800
Rocky Creek	21A10A	1B	37N	10L	3400	Rocky Creek	21C35	13	37N	10L	3400
Schreiber Meadow	21A14	20	36N	10L	3400	Schreiber Meadow	21C35	13	37N</		



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION GAGES

NAME	NUMBER	SE.	TWP.	RANGE	ELEV.	NAME	NUMBER	SE.	TWP.	RANGE	ELEV.	NAME	NUMBER	SE.	TWP.	RANGE	ELEV.	
UPPER COLUMBIA DRAINAGE																		
Pend Oreille River	Vrough #2					Wenatchee River (continued)	5310					Lewis River	Divide Meadow	21C29a	21	9N	10E	5600
Boyer Mountain	17A ²	7	31N	131	5250	Colockum Creek	20R25SP110	20N	10L			Grand Meadow	21C25	2B	BN	9L	39N	12E
Kunchkriss Meadow	17A1	24	37N	441	5000	Colockum Creek, Upper	20B22	11	20N	20L		Lone Pine Mountain	21C26	B	9N	7E	3500	
Winchester Creek	17A3	30	33N	431	2970	Colockum Creek, Lower	20B23	1	20N	20L		Marble Mountain	22C5a	24	BN	5L	3200	
Boulder Road	18A2	36	34N	361	1450	Squithuck Creek	20B3	12	21N	19E		New Muddy River	22C6	36	BN	6E	2000	
Butte Creek	18A3	28	39N	351	4070	Beehive Springs	20B4	18	21N	20L		Oldman Pass	21D19	22	6N	7E	3100	
Cabin Creek	18A8	5	38N	361	3170	Scout-A-Vista	20B4	18	21N	20L		Plains of Abraham	22C1a	35	36N	16E	4050	
Gout Creek	18A4	26	31N	351	3595	Jump-Off	20BB	34	21N	20L		Smith Creek Road	21A29	24	36N	16E	3500	
Snow Cap's Creek	18A5	3	38N	361	2150	Steinitz Slide	20B6	30	21N	20L		Spencer Meadow	22C4	29	36N	14E	1900	
Show Caps' Trail	18A6	5	38N	361	2720	Upper Wheeler	20B7M	30	21N	20L		Surprise Lakes	21C13a	14	7N	7E	2800	
Summit G. S.	18A7	20	39N	351	4600	Crab Creek	20B7M	30	21N	20L		Table Mountain	21C24a	20	9N	9E	4200	
COLVILLE RIVER																		
Baird	17Ab	19	36N	421	3215	Greston-kunz	1BB1m	32	27N	34E		Cayuse Pass	21C16	15	16N	10E	5300	
Carlson	1BA9	34	32N	381	2885	Jack Woods	1BB3m	2B	27N	31E		Noquito Meadows	21C50	33	10N	7E	4100	
Chewelah	17A4	11	32N	411	1925	Krause	1BB4m	21	27N	33E		Ohanapecosh	21C32	28	15N	10E	2200	
Stranger Mountain	17A5	26	31N	381	4990	Sheefels	1BB5m	17	27N	32E		Packwood Lake	21C31	21	15N	10E	2870	
To go	1BA10	6	29N	381	3370	Sherman	1BB7m	24	27N	33E		Pigtail Peak	21C33	11	13N	11E	5400	
Sherman Creek Pass	18A1	19	36N	35E	5550	Wheatridge	1BBcm	24	25N	32E		Potato Hill	21C14	36	10N	10E	3600	
Okanogan River	18A1					Yakima River	21B1m	24	12N	14E		William Creek	21C50	3	15N	BE	3250	
Clark	19A8a	2	36N	23E	7000	Ahtanum R. S.	21C11	24	12N	14E			21A9a	7	40N	7E	4400	
Muckamuck	19A9a	20	36N	24E	6750	Big Boulder Creek	21B9	25	2N	14E			21A13	22	37N	BE	1600	
Matton Creek No. 1	19A1	19	37N	24E	5700	Bumping Lake	21C8	23	16N	12E			21A15	18	36N	9E	1600	
Murton Creek No. 2	19A1	19	37N	24E	6000	Colockum Pass	21C26	13	16N	12E			21A15	25	37N	9E	4500	
Paysatay Creek	20A28a	32	40S	18E	4300	Dromery Flat	20B9P	25	20N	20E			21A23	9-10	38N	BE	5100	
Rusty Creek	19A2Pm	18	35N	24E	4000	Fish Lake	20B10	17	19N	20L			21A26	17	39N	9E	3700	
Salmon Meadows	19A10a	15	35N	23E	4500	French Lake	21B4	28	24N	14E			21A25SP	17	39N	9E	4300	
Starvation Mtn.	19A10a	15	35N	23E	6750	Grouse Camp	21C10	3	12N	13E			21A26	29	15N	8E	2760	
Touts Coulee	19A6	30	39N	25E	2845	Ihigh Creek	20B11	29	21N	19E			21A25	17	39N	9E	5500	
Methow River	20A10a	10	38N	20L	6400	Joe Lake	21B16a	22	23N	12E			21A21a	16	40N	9E	5050	
Billy Goat Pass	20A29a	8	39N	20E	7000	Lake Cle Elum	21B14m	15	20N	14E			21C35	13	15N	BE	5050	
Dollar Watch	20A5A	15	40N	23E	7000	Lemah Creek	21B7a	20	19N	20E			21C1	13	15N	BE	5050	
Harts Pass	19A5a	15	40N	23E	7000	Munastash	20C1	24	17N	16E			21B3	30	18N	11E	6000	
Horseshoe Basin	19A7	36	34N	25E	4650	Narum	20B14	22	20N	14E			21B13	30	18N	11E		
Loup Loup						Trail Creek	21BB	13	23N	13E			21B13	30	18N	11E		
CHELAN LAKE BASIN																		
Cloudy Pass	20A22a	12	31N	15E	6500	Tunnel Avenue	20B26a	16	22N	19E			Green River	21B24	18	20N	11E	1800
Greenwood Flat	20A25a	3	31N	16E	3540	Walters Flat	20B15	22	20N	19E			Airstrip Creek	21B25	27	21N	8E	1200
Little Meadows	20A24a	8	31N	16E	5275	Waptus Lake	21B49a	12	23N	13E			Charley Creek	21B26	21	21N	9E	3200
Lyman Lake	20A23a	1B	31N	16E	5900	White Pass (East Side)	21C28	2	13N	11E			Cougar Mountain	21B27	14	20N	8E	2900
Park Creek Flat	20A13a	19	34N	16E	2220	White Pass (Leach Lake)	21C27	1	13N	11E			Grass Mountain No. 2	21B28	12	20N	8E	2100
Park Creek Ridge	20A12a	1B	34N	16E	4600							Lester Creek	21B29	36	20N	10E	3100	
Petersons	20A16a	3	34N	17E	3730							Lynn Lake	21B30	22	20N	BE	4000	
Rainy Pass	20A30a	32	31N	20E	6300							Home Sweet Home	21B31	5	19N	11E	4700	
Safety Harbor	20A31a	34	33N	18E	6500							Sundown Pass	21B32	31	22N	10E	5000	
War Creek Pass	20B21a	10	28N	1BE	4900							Black and White Lakes	21B33	18	24N	SW	4200	
LOWER COLUMBIA DRAINAGE																		
Entiat River	20B28a	19	28N	1BF	5425	Asotin Creek	21B1m	12	23N	15E			Four Stream	21B24	18	20N	11E	3200
Brief	20B19	34	28N	1BE	1600	Spruce Springs	21B12	9	BN	40E			Home	21B25	27	21N	8E	3000
Entiat Meadow	20A33a	2	31N	17E	4540	Mill Creek	21B16	35	22N	17E			Sweet Home	21B26	25	24N	7W	3900
Four Mile Ridge	20B27a	15	29N	19E	6B00	Couse Homestead	17C1	11	9N	40E			Sundown Pass	21B27	31	22N	10E	2500
Fox Camp	20A36a	22	29N	1BE	3540	Martin Springs (Helmers SM) 17C2M	23	9N	40E			Deer Lake	21B28	1B	19N	11E	4100	
Pope Ridge	20B24SP	22	29N	1BE	3540							Black and White Lakes	21B29	17	24N	SW	4200	
Pugh Ridge	20A52a	34	30N	19E	6725							Four Stream	21B30	1	23N	8W	3000	
Shady Pass	20A57	20	29N	19E	6200							Home Sweet Home	21B31	5	24N	SW	4700	
Snow Brushy	20A35a	21	30N	17E	3910							Sundown Pass	21B32	31	22N	10E	3000	
Tommy Creek	20B21a	10	28N	1BE	4900	Satus Pass	20D1	21	6N	17E			Deer Lake	21B33	14	2BN	9W	3900
WENATCHEE RIVER																		
Berne-Mill Creek (New)	21B23	7	26N	15E	3170	White Salmon River	21C12	35	7N	BE			Snoqualmie River	21B48	31	27N	9E	3500
Blewett Pass No. 2	21B14SP	13	26N	14E	3240	Cultus Creek	20B2	17	4270				Alpine Meadow	21B2	19	22N	11E	3625
Chiwukum G. S.	20B16	4	25N	17E	4270							Ohalie Meadows	21B1B	26	26N	9E	1900	
Lake Wenatchee	20B5	33	27N	17E	1B10							South Fork Tolt						
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540	Blue Lake	21C22a	19	27N	17E			Bob's Trail	21B17	11	21N	9E	2400
Pugh Ridge	20A57	34	30N	19E	6725							Rex River	21B18	24	21N	10E	3000	
Shady Pass	20A52a	20	29N	19E	6200							South Fork Cedar	21B19	1	21N	10E	3400	
Snow Brushy	20A35a	21	30N	17E	3910							Tinkham Creek	21B20					
Tommy Creek	20B21a	10	28N	1BE	4900													
LEWIS RIVER																		
Berne-Mill Creek	21B23	7	26N	15E	3170													
Blewett Pass No. 2	21B14SP	13	26N	14E	3240													
Chiwukum G. S.	20B16	4	25N	17E	4270													
Lake Wenatchee	20B5	33	27N	17E	1B10													
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540													
Pugh Ridge	20A57	34	30N	19E	6725													
Shady Pass	20A52a	20	29N	19E	6200													
Snow Brushy	20A35a	21	30N	17E	3910													
Tommy Creek	20B21a	10	28N	1BE	4900													
LEMOON RIVER																		
Berne-Mill Creek (New)	21B23	7	26N	15E	3170													
Blewett Pass No. 2	21B14SP	13	26N	14E	3240													

WATER SUPPLY OUTLOOK

State of Washington
February 1, 1977

* The water supply outlook for irrigation and power in the *
* state of Washington is very poor for this time of year. *
* Measurements of snow cover in the state and tributary areas *
* indicate that the snow pack is at a record low as of *
* February 1. Some of our tributary areas, such as the Columbia *
* main stem in Canada, have near normal snow packs but *
* generally over the area as a whole the snow packs are very *
* deficient. Precipitation has also been very low since the *
* month of August. This lack of precipitation in the fall, *
* coupled with the low snow packs, has resulted in extremely *
* dry soils which will have the tendency to reduce runoff even *
* further. The one bright spot in the whole water supply *
* picture is the fact that reservoirs have more than normal *
* amounts of water in storage as of February 1.
*

SNOW COVER

The snow packs in the state are the lowest that have ever been measured in the history of the snow survey program. Drainage areas such as the Elwha and Dungeness on the Olympic Peninsula have no snow at the two snow courses in that area. A better measure of a drainage division with the lack of snow is the Yakima Drainage, measured by twenty-five snow courses. This watershed has a current snow pack that is only 4 percent of normal. In the Upper Columbia Basin of western Montana, northern Idaho, and Washington, the snow packs range from the above listed low for the Yakima Basin to a high of 43 percent of normal for the Kettle River. This high figure is influenced to a large extent by the measurements in British Columbia. Along the Lower Columbia Drainage, the snow pack ranges from no snow at the one snow course on the Klickitat Drainage to 19 percent of normal for the Mill Creek Drainage, tributary to the Walla Walla River, in the Blue Mountains. The Puget Sound Drainage ranges from 2 percent of normal, as measured by one snow course in the Snoqualmie Drainage, to 25 percent of normal for the Skagit Watershed, measured by twelve snow courses. As previously stated, there was no snow at the two snow courses in the Olympic Peninsula. It is unknown what the snow cover on the Nisqually Basin is because that snow course network was discontinued.

RESERVOIRS

Only four of the reported reservoirs in the state of Washington have below normal amounts of water in storage as of February 1. Bumping Lake is 53 percent of average, Keechelus, 68 percent, Conconully, 74 percent, and Chelan, 87 percent. Storage in the remaining reservoirs ranges up to 64 percent above normal for this time of year. Under careful management, it is expected that these reservoirs will satisfy the bare necessities of the water users below, but there will be no surplus water for any use.

PRECIPITATION

Winter precipitation has all been markedly below normal throughout the state and tributary areas. The greatest amount of rainfall reported by the National Weather Service was in the Columbia Drainage in Canada. This amount was 51 percent of normal. The least amount occurred along the southwestern slopes of the Cascades where only 26 percent of normal precipitation occurred. Central and northeastern Washington had this near record low precipitation of 28 percent of normal. During January, rainfall on the southwestern slopes of the Cascades was only 17 percent of average.

STREAMFLOW

River measurements, reported by the United States Geological Survey, indicate that during the month of January, flows of the rivers ranged from a low of 16 percent of normal for the Palouse River, as measured at Hooper, to a high of 87 percent of normal for the Columbia at Birchbank. The flow of the Wenatchee River was reported at 100 percent of normal, but this is believed to be an erroneous measurement caused by ice effects in the river. Preliminary forecasts issued by the Soil Conservation Service and coordinated with the National Weather Service, River Forecast Center, indicate the expected streamflow during the April-September period will range from a low of 31 percent of normal for the Ahtanum Creek, as measured near Tampico, to a high of 73 percent for the Columbia River at Birchbank. The forecast for the Columbia River at The Dalles, the last measuring station on the Columbia River and the one that totals up the whole Columbia Basin in the northwest, is for a flow of 58,500,000 acre feet, or 56 percent of normal for the April-September period. The record low for this station occurred in 1926, when 56,600,000 acre feet of water flowed by this station. Unless conditions improve during the months of February and March, it is expected that the forecast for the Columbia River will be dropped even below this 1926 low.

STREAMFLOW FORECASTS - FEBRUARY, 1977

The following summarized runoff forecasts are based principally on mountain snow-cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. Streamflow figures for 1976 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1977	Seasonal Streamflow in Thousands of Acre-Feet						15-Yr. Average 58-72
		% 15-Yr. Avg.	Fore- cast period	1976	1975	1974		

COLUMBIA BASIN

COLUMBIA RIVER SYSTEM

Columbia River at Birchbank 1/	33900	73	Apr-Sept	53937	41101	54411	46410
	25800	69	Apr-July	38979	32944	44439	37548
	18000	65	Apr-June	26054	22429	31853	27549
Columbia River at Grand Coulee 1/	44299	54	Apr-Sept	80974	66501	88368	69020
	36200	62	Apr-July	62715	55870	75997	58368
	27600	60	Apr-June	46556	41377	58725	46049
Columbia River bl Rock Island Dam 1/	47500	63	Apr-Sept	86849	73553	96238	75290
	38000	59	Apr-July	67890	62727	83339	64181
	27900	55	Apr-June	50520	46759	64205	50594
Columbia River at The Dalles, Or 1/	58500	56	Apr-Sept	122876	108901	139431	104600
	49800	55	Apr-July	99965	94195	123171	89875
	42400	58	Apr-June	79164	73012	98926	73143

PEND OREILLE RIVER SYSTEM

Pend Oreille River bl Box Canyon	8000	50	Apr-Sept	17638	16946	21551	15950
	7200	49	Apr-July	15979	15271	20103	14677
	6100	48	Apr-June	13687	11814	16732	12767

KETTLE RIVER SYSTEM

Kettle River nr. Laurier	1220	65	Apr-Sept		1860	2831	1873
	1170	65	Apr-July		1779	2752	1794
	1070	65	Apr-June		1592	2476	1640

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1977	Seasonal Streamflow in Thousands of Acre-Feet						15-Yr. Average 58-72
		% 15-Yr. Avg.	Fore- cast period	1976	1975	1974		
<u>KETTLE RIVER SYSTEM (Cont.)</u>								
Colville River								
at Kettle Falls	65	44	Apr-Sept	225	286	148		
	59	43	Apr-July	203	269	137		
	54	42	Apr-June	187	252	128		
<u>SPOKANE RIVER SYSTEM*</u>								
Spokane River	1240	42	Apr-Sept	3215	3418	4801	2982	
at Post Falls ID 2/	1160	42	Apr-July	3069	3275	4682	2899	
	1130	41	Apr-June	2884	3033	4409	2773	
<u>OKANOGAN RIVER SYSTEM</u>								
Similkameen River								
nr. Nighthawk	910	60	Apr-Sept	1967	1434	2216	1516	
	850	60	Apr-July	1743	1339	2092	1424	
	720	59	Apr-June	1357	1092	1710	1222	
Okanogan River	1070	62	Apr-Sept	2135	1582	2757	1723	
nr. Tonasket	990	63	Apr-July	1785	1437	2534	1582	
	850	63	Apr-June	1361	1181	2029	1349	
<u>METHOW RIVER SYSTEM</u>								
Methow River	450	44	Apr-Sept	992	1665	1031		
nr. Pateros	440	46	Apr-July	911	1555	963		
	365	44	Apr-June	728	1268	832		
<u>CHELAN RIVER SYSTEM</u>								
Chelan River	650	52	Apr-Sept	1467	1364	1749	1253	
at Chelan 3/	570	51	Apr-July	1189	1210	1508	1112	
	470	54	Apr-June	829	858	1115	881	
Stehokin River	490	54	Apr-Sept	1040	1223	904		
at Stehokin	410	53	Apr-July	796	996	776		
	360	60	Apr-June	526	717	600		
Entiat	110	46	Apr-Sept	268	387	239		
nr. Ardenvoir	100	46	Apr-July	244	347	220		
	85	47	Apr-June	182	256	180		

- * Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho
 2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.
 3/ Observed flow corrected for storage in Lake Chelan.

Basin, Stream and Station	Forecast Runoff 1977	Seasonal Streamflow in Thousands of Acre-Feet						15-Yr. Average 58-72
		% 15-Yr. Avg.	Fore- cast period	1976	1975	1974		
WENATCHEE RIVER SYSTEM								
Wenatchee River at Plain	725	55	Apr-Sept	1396	1910	1312		
	640	54	Apr-July	1262	1652	1187		
	480	50	Apr-June	924	1188	956		
Wenatchee River at Peshastin	900	50	Apr-Sept	2134	1920	2556	1786	
	810	50	Apr-July	1795	1738	2232	1629	
	650	49	Apr-June	1261	1279	1632	1324	
Ste milt Basin nr. Wenatchee	60	43	May-Sept	144*	134*	141*	138*	
YAKIMA RIVER SYSTEM								
Yakima River nr. Martin <u>4/</u>	74	52	Apr-Sept	153	168	231	142	
	70	53	Apr-July	140	154	214	131	
	63	54	Apr-June	116	127	170	116	
Yakima River at Cle Elum <u>5/</u>	490	51	Apr-Sept	1112	1463	968		
	450	52	Apr-July	1012	1335	877		
	415	54	Apr-June	852	1067	764		
Yakima River nr. Parker <u>6/</u>	640	37	Apr-Sept	2229	3216	1730		
	610	36	Apr-July	2141	3092	1701		
	540	34	Apr-June	1859	2601	1580		
Kachess River nr. Easton <u>7/</u>	62	50	Apr-Sept	131	154	207	125	
	58	49	Apr-July	119	145	193	118	
	51	48	Apr-June	97	120	156	106	
Cle Elum River nr. Roslyn <u>8/</u>	260	55	Apr-Sept	560	539	745	477	
	235	54	Apr-July	483	492	664	437	
	210	56	Apr-June	366	388	500	372	

* Thousands of Miners' inches.

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.

Basin, Stream and Station	Forecast Runoff 1977	Seasonal Streamflow in Thousands of Acre-Feet						15-Yr. Average 58-72
		% 15-Yr.	Fore- cast Avg.	1976	1975	1974		
		period						
<u>YAKIMA RIVER SYSTEM (Cont.)</u>								
Bumping River nr. Nile <u>9/</u>	70 64 56	48 48 50	Apr-Sept Apr-July Apr-June	174 150 108	179 163 119	230 206 152	146 134 112	
American River nr. Nile	57 52 47	45 45 47	Apr-Sept Apr-July Apr-June		149 137 104	203 181 137	128 118 100	
Tieton River at Tieton Dam <u>10/</u>	117 105 85	47 50 49	Apr-Sept Apr-July Apr-June	308 245 180	299 253 187	402 334 253	247 211 172	
Naches River nr. Naches <u>11/</u>	365 340 290	41 42 42	Apr-Sept Apr-July Apr-June		1054 952 761	1428 1286 1038	889 810 698	
Ahtanum Creek nr. Tampico <u>12/</u>	15 13 12	31 30 31	Apr-Sept Apr-July Apr-June		57 51 44	83 76 64	48 44 39	
<u>LOWER COLUMBIA RIVER SYSTEM</u>								
Mill Creek nr. Walla Walla	14 12 11	56 50 52	Apr-Sept Apr-July Apr-June		39 34 30	57 51 47	27 24 21	
Lewis River at Ariel <u>13/</u>	775 640 575	58 56 56	Apr-Sept Apr-July Apr-June	1333 1161 1012	969 1022 885	1952 1760 1489	1341 1151 1028	
Cowlitz River Blw. Mayfield Dam	1175 1000 930	56 54 59	Apr-Sept Apr-July Apr-June		2127 1852 1451	3323 2976 2416	2101 1846 1578	

9/ Observed flow corrected for storage in Bumping Lake.

10/ Observed flow corrected for storage in Rimrock Lake.

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.

12/ Observed flow of North and South Forks (Combined).

13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.

14/ Observed flow corrected for storage in Mayfield Reservoir.

Basin, Stream and Station	Forecast Runoff 1977	Seasonal Streamflow in Thousands of Acre-Feet						15-Yr. Average 58-72
		% 15 Yr. Avg.	Fore- cast period	1976	1975	1974		
<u>LOWER COLUMBIA RIVER SYSTEM (Cont.)</u>								
Cowlitz River at Castle Rock	1660 <u>14/</u> 1420 1260	60 59 60	Apr-Sept Apr-July Apr-June	3030 2550 2115	2646 2278 1816	4128 3694 3029	2773 2416 2083	
<u>OLYMPIC PENINSULA</u>								
<u>DUNGENESS RIVER SYSTEM</u>								
Dungeness River nr. Sequim	90 77 58	55 56 56	Apr-Sept Apr-July Apr-June		149 118 82	205 162 111	165 137 104	
<u>PUGET SOUND</u>								
<u>SKAGIT RIVER SYSTEM</u>								
Skagit River at Newhalem	1330	55	Mar-Aug		2339	3169	2418	

14/ Observed flow corrected for storage in Mayfield Reservoir.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about February 1, 1977, as percent of the same date in 1976 and 1975 and average of record.

Tributary Basin	No. of Courses Average	1977 Snow Water Expressed as percent of			1958-72 Avg.
		1976	1975		
		<u>UPPER COLUMBIA BASIN</u>			
Pend Oreille	8	37	24	26	
Kettle	15	43	39	43	
Colville	5	27	14	14	
Spokane	4	35	29	29	
Okanogan	30	31	30	33	
Methow	6	15	15	15	
Chelan	4	4	8	16	
Entiat	3	9	10	10	
Wenatchee	9	12	10	12	
Yakima	25	12	11	4	
Ahtanum	2	9	6	-	
<u>LOWER COLUMBIA</u>					
Mill Creek	3	17	16	19	
Klickitat	1	No Snow			
White Salmon	2	16	13	11	
Lewis	17	10	8	6	
Cowlitz	3	10	10	9	
<u>PUGET SOUND</u>					
White	3	12	9	11	
Green	10	8	6	8	
Snoqualmie	1	2	-	2	
Skykomish	2	12	11	17	
Skagit	12	18	20	25	
Baker	10	17	18	18	
<u>OLYMPIC PENINSULA</u>					
Elwha	1	No Snow			
Dungeness	1	No Snow			

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (February)			
			1977	1976	1975	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	21.7	169.1	63.8	138.4
Columbia	Franklin D. Roosevelt Lake	5232.0	4172.0	5116.0	4844.6	3766.0
Columbia	Banks Lake	714.9	704.2	712.2	714.9	566.9
Okanogan	Conconully Reservoir	13.0	8.0	10.0	10.6	10.8
Okanogan	Salmon Lake	10.5	9.6	9.8	9.2	7.6
Chelan	Lake Chelan	676.1	258.2	513.5	242.9	295.9
<u>YAKIMA</u>						
Yakima	Keecehlus Lake	157.8	65.6	118.3	127.8	96.1
Kachess	Kachess Lake	239.0	192.4	206.8	142.4	175.7
Cle Elum	Lake Cle Elum	436.9	382.0	308.4	338.2	232.9
Bumping	Bumping Lake	33.7	4.4	11.4	5.3	8.3
Tieton	Rimrock Lake	198.0	128.1	140.0	136.3	110.6
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1404.1	769.7	1258.7	1094.5	582.1
Skagit	Diablo Reservoir	90.6	83.5	88.0	84.9	84.4
Skagit	Gorge Reservoir	9.8	8.4	8.3	8.2	-

1/ Based on Active Storage

* 15-year Average 1958-72

SOIL MOISTURE - FEBRUARY

Drainage Basin and Station	Number	Elev.	Profile Depth	Inches Total Capacity	Soil Moisture Content		
					1977	1976	Inches as of Feb. 1 1975
<u>OKANOGAN</u>							
Salmon Meadows	19A2M	4500	48	5.4	Frozen	3.6	2.0
Trout Creek	3-M	3600	48	7.3	Frozen	-	3.2
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	-	-	-
Lake Cle Elum	21B14M	2200	48	12.8	-	-	-
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	-	-	10.2
Helmers	17C2M	4400	48	12.0	-	-	8.8
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	-	11.6	8.6

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile Depth	Inches Total Capacity	Soil Moisture Content (Inches) as of Oct. 1		
					1976	1975	1974
<u>OKANOGAN</u>							
Salmon Meadows	19A02M	4500	48	5.4	3.4	3.2	1.8
Trout Creek	3-M	3600	48	7.3	3.4	3.1	3.0
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	-	-	-
Lake Cle Elum	21B14M	2200	48	12.8	-	-	-
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	-	7.3	-
Helmers	17C2M	4400	48	12.0	-	6.5	-
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	-	8.6	5.4

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	FALL			WINTER		
	Sept-Oct Observed	1976 2/ Departure		Nov-Dec 1976 Observed	Jan 1977 2/ Departure	
Columbia in Canada	3.10	-1.92		5.64		-5.49
Pend Oreille - Spokane	1.54	-2.50		4.28		-7.90
Northeastern Washington	0.87	-1.60		1.88		-4.83
Southeastern Washington	1.45	-1.06		2.08		-4.98
Central Washington	1.24	-3.51		5.60		-14.43
North Central Washington	0.61	-0.98		1.92		-2.92
Northwest Slope Cascades	6.65	-6.56		16.86		-21.07
Southwest Slope Cascades	4.30	-4.37		7.41		-21.50

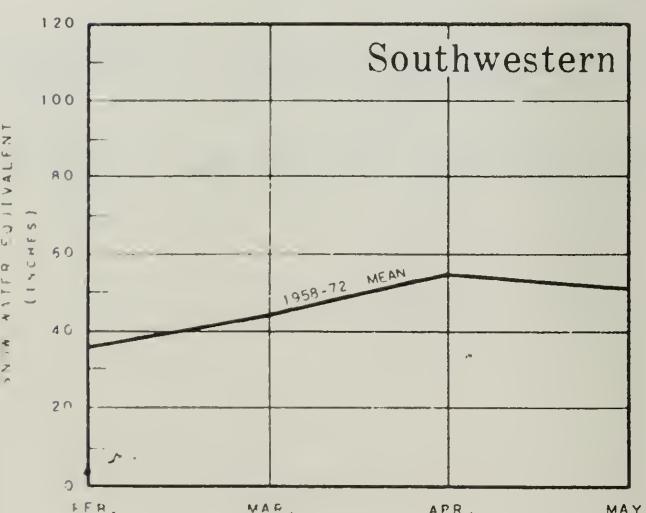
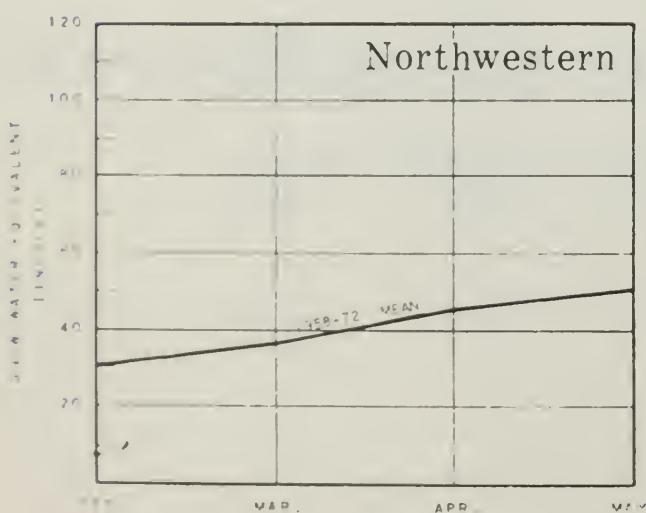
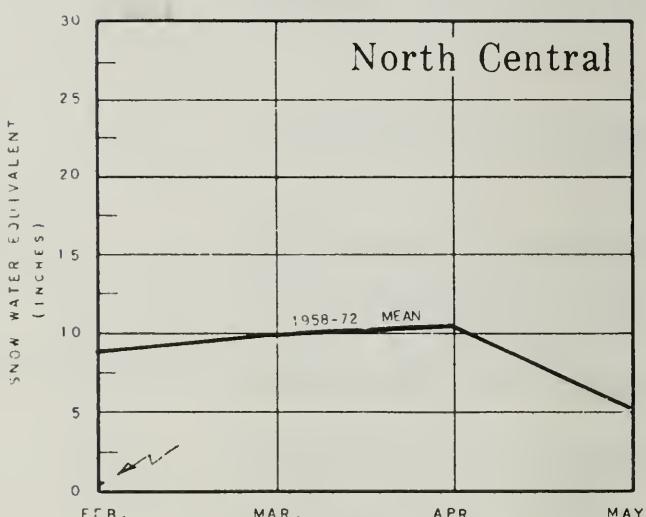
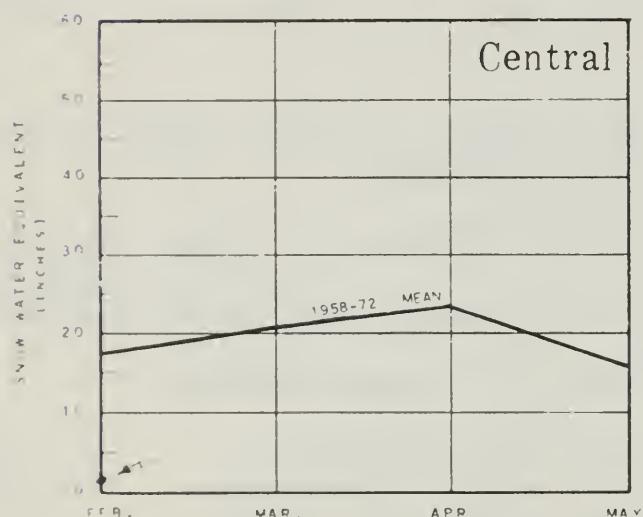
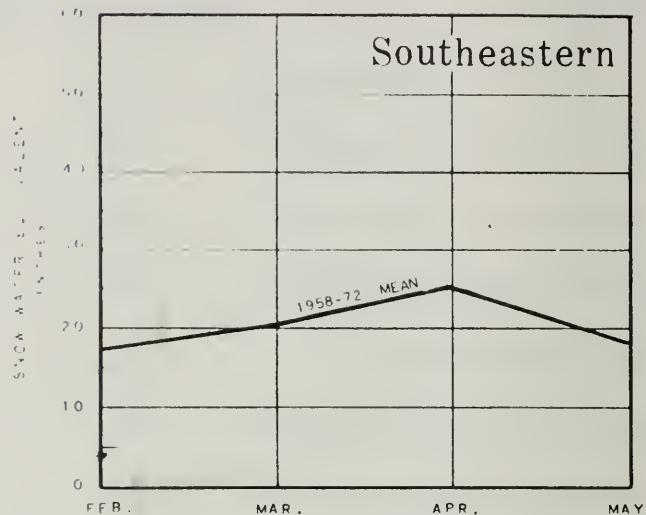
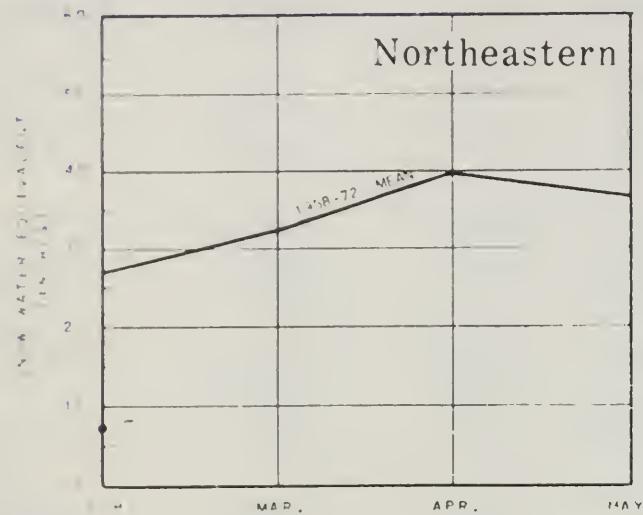
Northeastern Washington	- Lower Spokane, Colville, Sanpoil and Lower Kettle Drainages.
Southeastern Washington	- Touchet, Tucannon and Palouse Drainages.
Central Washington	- Yakima, Wenatchee and Chelan Drainages.
North Central Washington	- Methow and Okanogan Drainages.
Northwest Slope Cascades	- Puget Sound Drainages.
Southwest Slope Cascades	- Lower Columbia Drainages.

1/ - Preliminary analysis by National Weather Service from data furnished by Meteorloqical Services of Canada and the National Weather Service.

2/ - Departure from 15-year (1958-72) drainage division average.

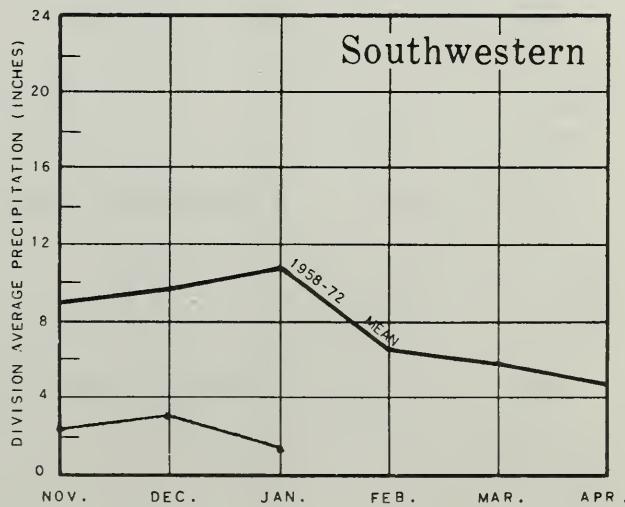
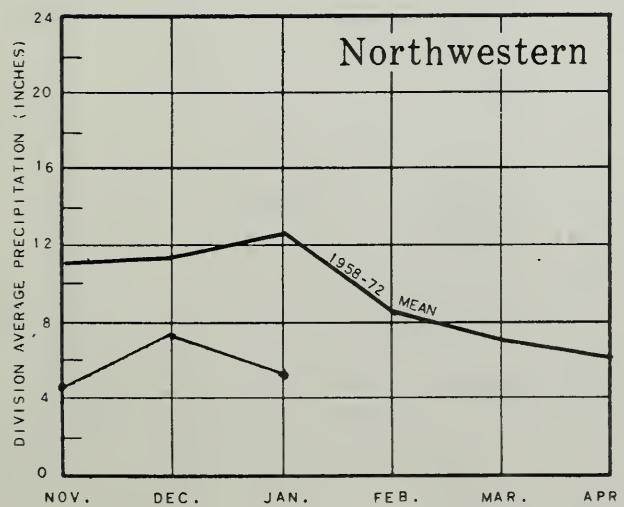
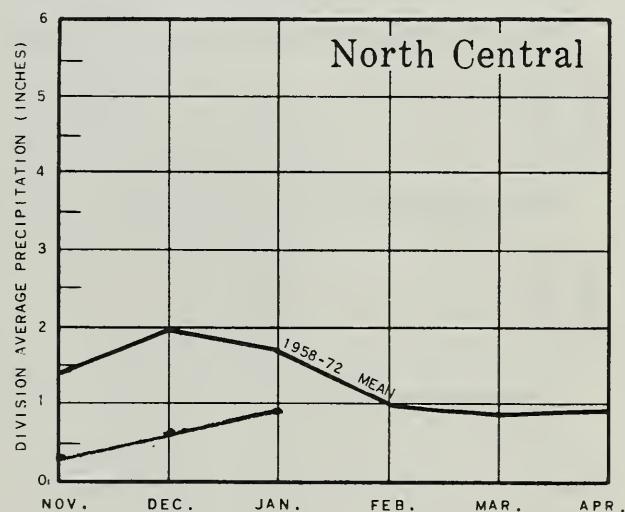
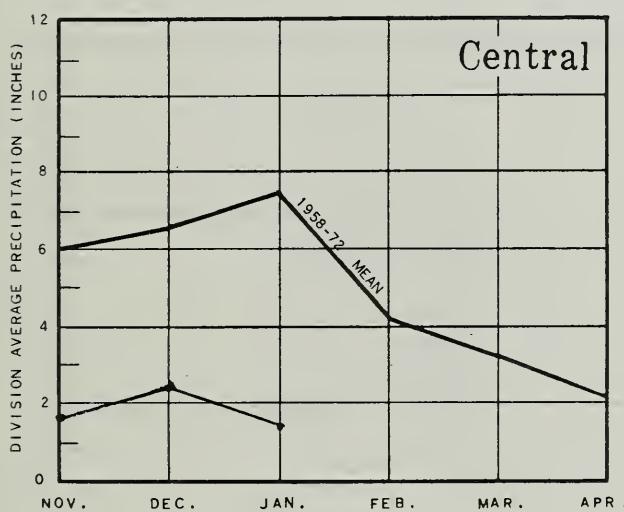
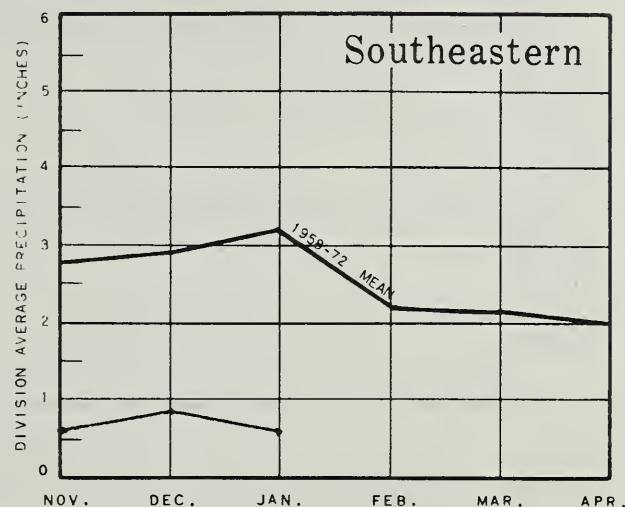
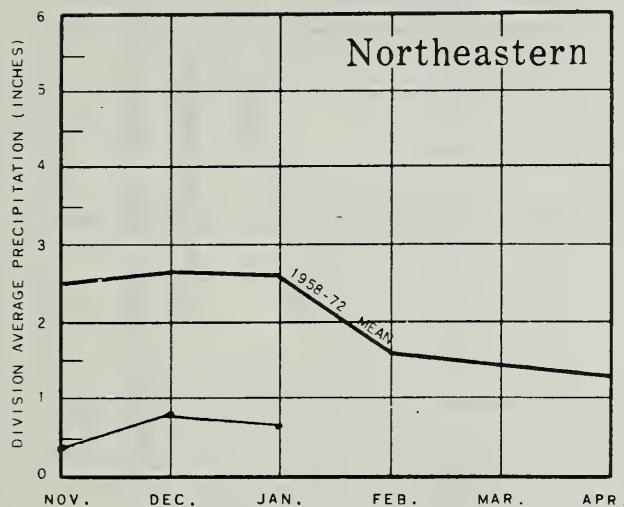
WASHINGTON SNOW COVER

DRAINAGE AREAS



WASHINGTON VALLEY PRECIPITATION

DRAINAGE AREAS

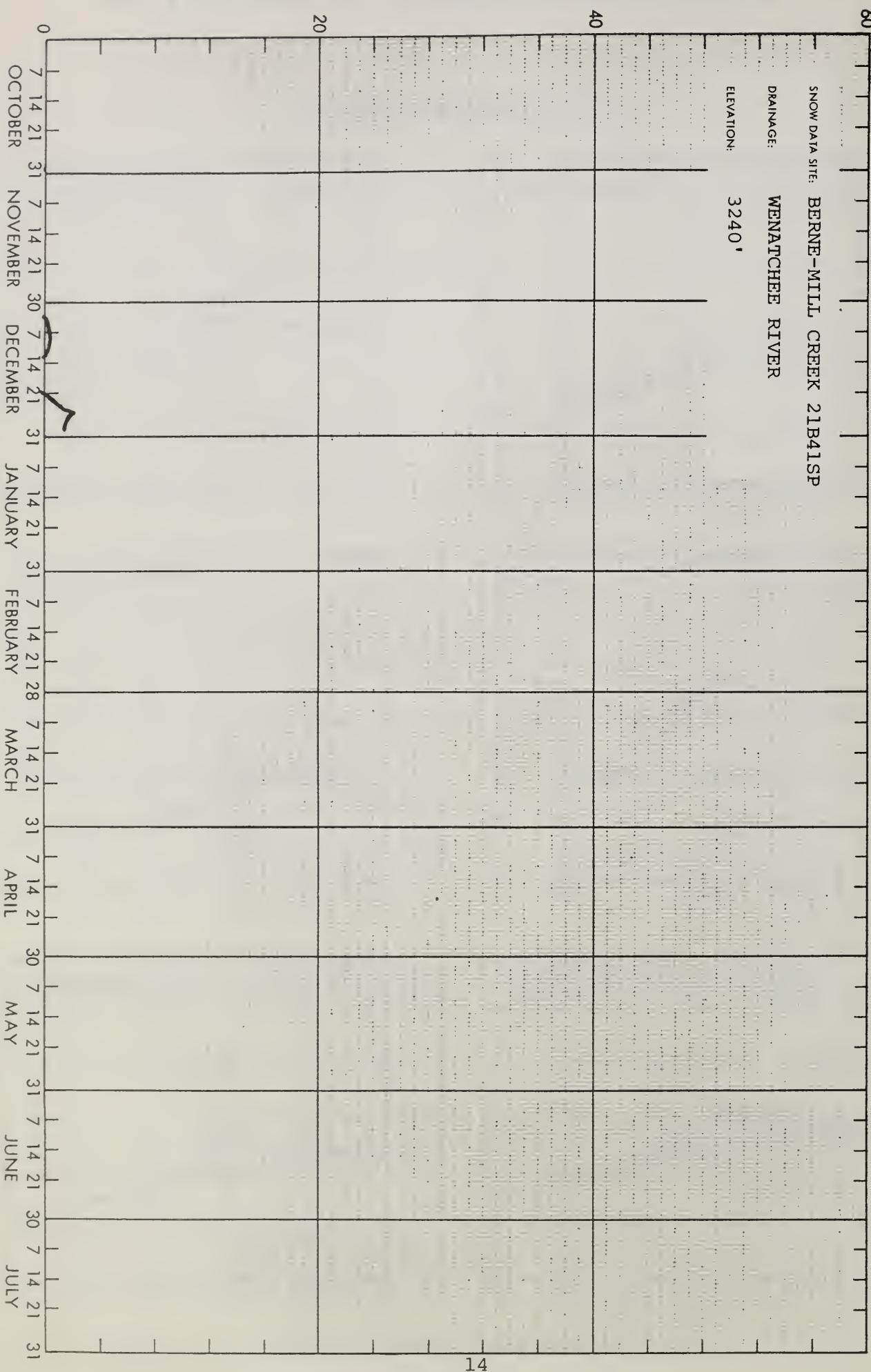


INCHES OF WATER IN SNOWPACK

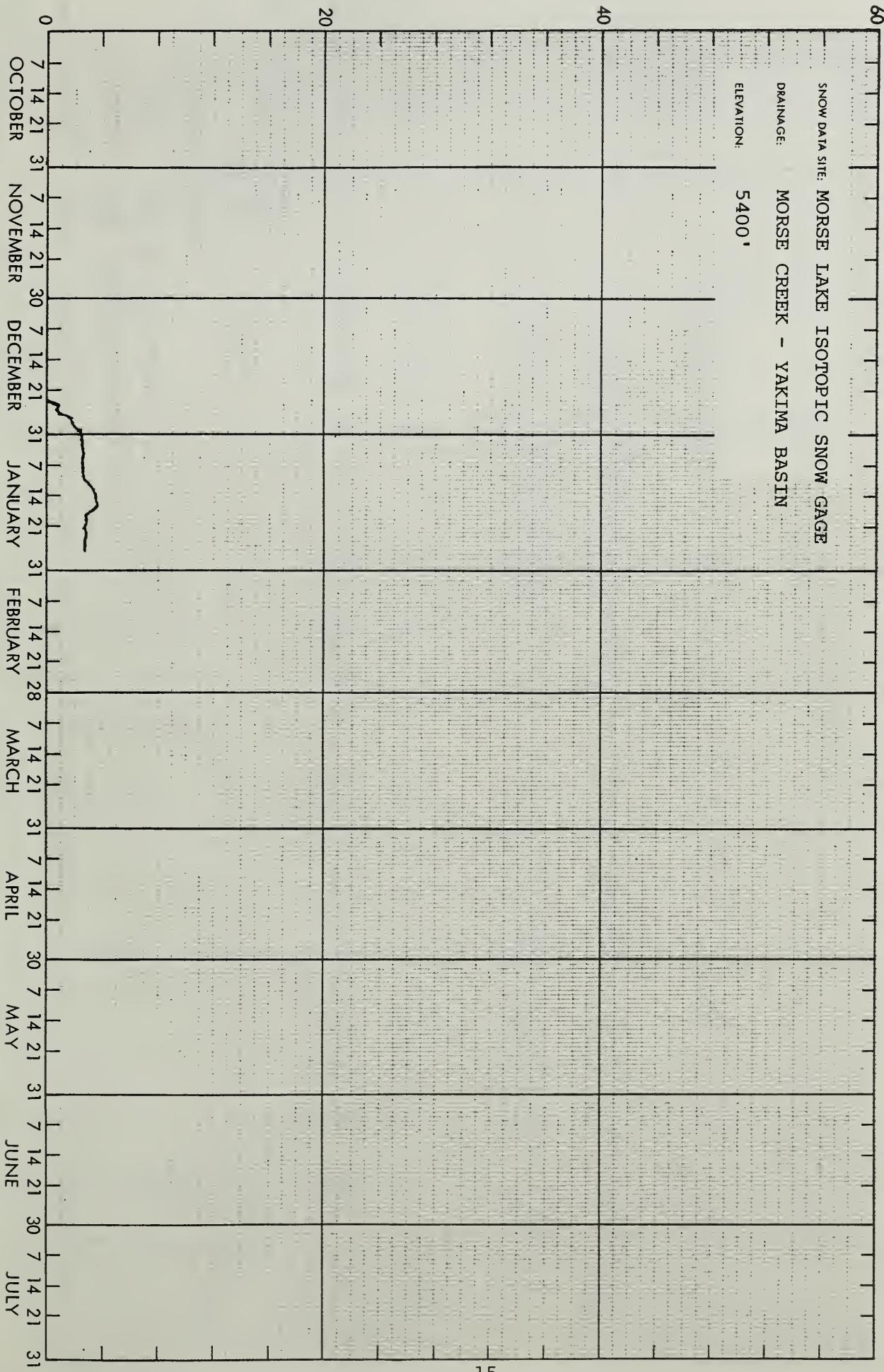
SNOW DATA SITE: BERNE-MILL CREEK 21B41SP

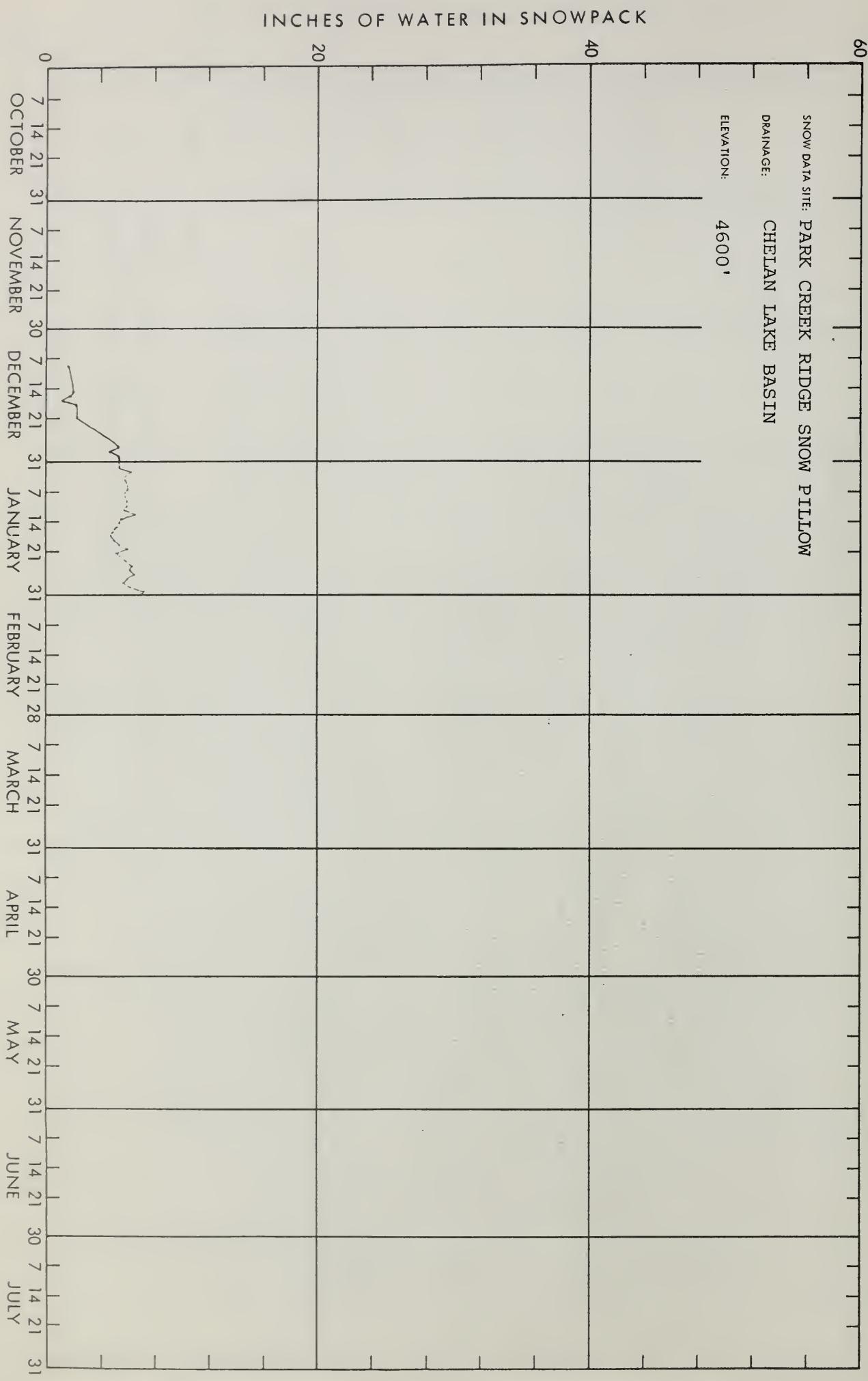
DRAINAGE: WENATCHEE RIVER

ELEVATION:
3240'



INCHES OF WATER IN SNOWPACK





SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #

U P P E R C O L U M B I A D R A I N A G EPEND OREILLE RIVER

Benton Meadow	16A02	2344	1/3	7	1.5	0.0	3.5
			1/25	12	1.7	3.4	6.0
Benton Spring	16A03	4900	1/3	12	2.4	2.6	8.4
			1/25	15	3.2	6.2	13.8
Chewelah	17A04	4925	1/29	11	2.0	7.2	13.0
Lookout	15B02	5250	12/30	24	4.8	11.8	15.6
			1/31	29	7.0	23.4	26.7
Nelson	19-Can	3050	11/3	0	0.0	2.1	-
			11/15	1.6	0.2	1.4	-
			11/29	5.5	0.9	2.4	-
			12/14	8.7	1.2	2.5	-
			12/30	15	2.6	4.5	7.8*
			1/28	18	3.1	8.8	11.5*
Schweitzer Bowl	16A06	4500	12/29	21	5.0	8.8	-
			1/27	25	7.0	14.9	22.6
Schweitzer Ridge	16A05	6100	12/29	25	5.8	19.2	-
			1/27	31	9.8	27.5	32.1
Winchester Creek	17A03	2970	1/28	11	1.7	4.9	9.7

KETTLE RIVER

Barnes Creek	90-Can	5300	1/26	38	10.0	15.5	14.5*
Big White Mtn.	154-Can	5500	12/29	23	4.5	-	-
			1/31	27	7.2	18.4	14.8*
Boulder Road	18A02	1450	12/30	7	0.9	2.5	2.7
			1/31	10	1.5	1.6	4.6
Butte Creek	18A03	4070	12/30	9.4	1.5	2.6	4.7
			1/31	14	2.4	6.2	7.4
Cabin Creek	18A08	3170	12/30	9	1.3	3.2	4.4
			1/31	11	1.7	5.7	6.5
Carmi	126-Can	4100	1/31	13	2.2	6.0	5.6*
Farron # 1	17-Can	4000	1/27	14	2.5	9.4	9.8*
Farron # 2	243-Can	4000	1/27	14	2.5	9.0	10.2*
Goat Creek	18A04	3595	12/30	8.2	1.3	2.5	4.1
			1/31	12	2.0	4.8	6.2
Monashee Pass	48A-Can	4500	12/30	19	4.2	5.9	7.5*
			1/26	27	6.8	11.4	9.7*
Old Glory Mountain	42-Can	7000	2/1	Not Measured		20.8	19.9*
Snow Caps Creek	18A05	2150	12/30	7	1.0	2.1	3.0
			1/31	10	1.5	4.0	4.8
Snow Caps Trail	18A06	2720	12/30	7.4	1.1	2.1	3.5
			1/31	10	1.5	4.9	5.5
Summit G. S.	18A07	4600	12/30	7.1	1.1	1.8	3.8
			1/31	11	1.6	4.8	5.9

Average based on 1958-72 average

* Average for years of record

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average [†] #

KETTLE RIVER (Cont.)

Trapping Creek Lower	166-Can	3050	1/31	12	2.3	6.1	4.6*
Trapping Creek Upper	165-Can	4450	1/31	20	4.4	9.2	7.7*

COLVILLE RIVER

Baird	17A06	3215	1/30	12	2.4	3.8	6.1
Carlson	18A09	2885	1/29	7	0.6	2.6	4.5
Chewelah	17A04	4925	1/29	11	2.0	7.2	13.0
Stranger Mountain	17A05	5990	12/9	8	0.8	4.0	11.0
Togo	18A10	3370	12/9	6	0.5	5.6	10.1

SPOKANE RIVER

Above Burke	15B08	4100	12/30	24	5.3	8.4	-
			1/31	30	7.0	16.1	-
4th of July Summit	16B03	3100	12/30	0	0.0	0.0	4.1
			1/27	10	2.3	5.4	6.8
Lookout	15B02	5250	12/30	24	4.8	11.8	15.6
			1/31	29	7.0	23.4	26.4
Mosquito Ridge	16A04	5110		Late Report		22.3	-
Sherwin	16C01	3200	1/4	14	1.9	7.9	-
			2/1	16	3.6	11.6	11.0

OKANOGAN RIVER

Aberdeen Lake	6A-Can	4300	1/31	14	2.7	5.9	5.1*
Blackwall Peak	100-Can	6250	12/29	24	4.6	23.0	15.2*
			1/27	26	7.3	33.8	25.8*
Brenda Mine	193-Can	4800	1/28	18	3.3	12.7	10.6*
Brookmere	27-Can	3200	1/31	10	2.3	5.6	7.2*
Carrs Landing Upper	168-Can	3200	12/30	Trace	0.0	2.9	2.2*
			1/29	8.7	0.9	3.8	4.0*
Clark +	19A08a	7000	2/1	Not Measured		12.5	-
Dollar Watch +	20A29a	7000	2/1	24	6.0	15.2	19.4
Enderby	130-Can	6250	12/30	41	11.5	26.8	-
			1/31	49	14.6	30.2	26.2*
Freezeout Meadows New	20A38	5000	1/26	26	7.4	28.3	New
Hamilton Hill	107-Can	4900	1/27	17	4.1	14.9	10.8*
Harts Pass	20A05A	6500	1/26	32	9.7	43.7	32.7
Horseshoe Basin +	19A05a	7000	2/1	Not Measured		16.5	9.7
Isontok Lake	152-Can	6300	12/30	7.1	1.4	4.4	4.2*
			1/30	11	1.7	7.2	6.7*
Lost Horse Mtn.	105-Can	6300		Late Report		10.3	7.1*
Loup Loup	19A07	4650	1/28	3	0.4	4.7	7.6
McCulloch	4-Can	4200	12/30	9.1	1.1	3.2	3.4*
			1/30	15	2.5	6.6	5.0*

+ Snow water equivalent estimated from aerial stadia observation

Average based on 1958-72 average

* Average for years of record

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

OKANOGAN RIVER (Cont.)

Missezula Mtn.	106-Can	5100	1/29	13	2.4	7.7	7.2*
Mission Creek	5A-Can	6000	12/29	25	5.3	9.3	9.8*
			1/28	31	7.7	15.4	14.1*
Monashee Pass	48A-Can	4500	12/30	19	4.2	5.9	7.5
			1/26	27	6.8	11.4	9.7*
Mount Kobau	156-Can	5950	1/31	9.4	1.7	7.2	10.8*
Muckamuck +	19A09a	6390	2/1	Trace	0.0	13.2	-
Mutton Creek No. 1	19A01	5700	12/7	0	0.0	8.3	10.4
Mutton Creek No. 2	19A04	6000	1/27	2.2	0.5	9.2	10.9
Mutton Creek No. 2 SP	19A11SP	6000	2/1	Not Measured		6.9	New
New Copper Mtn.	46A-Can	4300	1/28	7.5	1.1	4.9	5.6*
New Penticton Res. #2	183-Can	5225	1/31	16	3.2	7.8	8.1*
Oyama Lake	203-Can	4400	1/27	14	2.6	5.4	5.9*
Paysayten +	20A28a	4300	2/1	12	3.6	15.5	13.0
Postill Lake	55-Can	4500	1/29	19	3.6	6.6	6.0*
Rusty Creek	19A03	4000	1/27	1.0	0.2	3.1	5.9
Salmon Meadows	19A02	4500	1/27	2.8	0.4	5.6	7.8
Silver Star Mountain	99-Can	6050	1/30	37	9.1	25.2	19.9*
Starvation Mountain +	19A10a	6750	2/1	0	0.0	14.5	-
Summerland Reservoir	3A-Can	4200	12/31	9.8	1.9	6.0	4.9*
			1/29	14	2.5	9.2	8.1*
Touts Coulee	19A06	2845	1/27	2.9	0.5	1.6	3.4
Trout Creek	3-Can	4700	1/28	14	2.4	8.3	5.3*
Vaseux Creek	233-Can	4600	1/2	11	1.4	2.6	2.8*
			1/30	13	2.2	4.5	5.6*
White Rocks Mtn.	70-Can	6000	1/31	21	5.3	18.7	21.3*

METHOW RIVER

Billy Goat Pass +	21A10a	6409	2/1	24	6.0	19.1	20.8
Dollar Watch +	20A29a	7000	2/1	24	6.0	15.2	19.4
Harts Pass	20A05A	6500	1/26	32	9.7	43.7	32.7
Horseshoe Basin +	19A05A	7000	2/1	Not Measured		16.5	9.7
Loup Loup	19A07	4650	1/28	3	0.4	4.7	7.6
Mutton Creek No. 1	19A01	5700	12/7	0	0.0	8.3	10.4
Mutton Creek No. 2	19A04	6000	1/27	2.2	0.5	9.2	10.9
Rusty Creek	19A03	4000	1/27	1	0.2	3.1	5.9
Salmon Meadows	19A02	4500	1/27	2.8	0.4	5.6	7.8
War Creek Pass +	20A31a	6500	2/1	Not Measured		41.6	-

CHELAN LAKE BASIN

Cloudy Pass +	20A22a	6500	2/1	Not Measured		39.3	29.0
Greenwood Flat +	20A25a	3540	2/1	Not Measured		-	23.3
Little Meadows +	20A24a	5275	2/1	8	2.4	38.3	32.2

Average based on 1958-72 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1977- APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Average [†] #

CHELAN LAKE BASIN (Cont.)

Lyman Lake +	20A23A	5900	2/1	Not Measured	50.2	42.1
Park Creek Flat +	20A13a	2220	2/1	Not Measured	32.3	27.3
Park Creek Ridge	20A12A	4600	1/1	- 5.4	-	-
Petersons +	20A16a	3730	2/1	Not Measured	-	25.1
Rainy Pass	20A09	4780	1/26	27 7.7	28.7	29.5
Safety Harbor +	20A30A	6300	2/1	7 1.8	-	-
War Creek Pass +	20A31a	6500	2/1	Not Measured	41.6	-

ENTIAT RIVER

Blue Creek G. S. +	20B28a	5425	1/16	24 9.0	-	-
			2/1	Late Report	39.9	-
Brief	20B19	1600	1/26	5 1.0	7.5	6.8
Entiat Meadows +	20A33a	4540	2/1	Late Report	42.8	-
Entiat River Trail +	20A34a	3325	2/1	Late Report	19.4	-
Four Mile Ridge +	20B27a	6800	2/1	Late Report	31.9	-
Fox Camp +	20A36a	6510	2/1	Late Report	56.6	-
Pope Ridge	20B20	3450	1/26	5 1.0	13.0	14.0
Pugh Ridge	20A32a	6725	2/1	Late Report	35.6	-
Shady Pass	20A37	6200	1/27	10 2.6	28.8	-
Snow Brush +	20A35a	3910	1/15	9 2.0	-	-
			2/1	Late Report	24.1	-
Tommy Creek +	20B21a	4900	1/5	12 3.0	-	-
			2/1	Late Report	20.3	-

WENATCHEE RIVER

Berne Mill Creek	21B23	3170	12/29	7.8	1.8	11.0	11.2
			1/14	14	2.2	-	16.8
			1/28	6.2	2.2	19.7	21.4
Berne Mill Creek New	21B41SP	3240	12/29	8.4	1.6	7.6	9.9
			1/28	0	0.0	16.0	18.7
Blewett Pass No. 2	20B02	4270	12/28	0	0.0	4.6	6.7
			2/1	0	0.0	10.1	13.0
Chiwaukum G. S.	20B16	1810	12/29	7	1.0	5.2	5.1
			1/14	7.4	1.1	7.9	7.8
			1/28	5.6	2.0	9.0	9.9
Lake Wenatchee	20B05	1970	12/29	6.7	1.9	8.4	6.1
			1/14	11	2.4	14.6	9.6
			1/28	6.9	2.4	13.1	12.1
Leavenworth R. S.	20B17	1127	12/27	2	0.5	2.0	3.4
			1/14	2.7	1.1	5.8	4.7
			1/28	1.6	0.8	6.0	6.0
Lyman Lake +	20A23A	5900	2/1	Not Measured	50.2	42.1	

Average based on 1958-72 average

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 5

SNOW	THIS YEAR				PAST RECORD	
	DRAINAGE BASIN and/or SNOW COURSE		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)
	NAME	Number				Last Year
						Average [#]

WENATCHEE RIVER (Cont.)

Merritt	20B18	2140	12/29	7.2	1.8	4.6	7.9
			1/14	13	2.0	11.4	11.7
			1/28	7.6	2.2	11.2	14.5
Stevens Pass	21B01	4070	11/30	3	1.0	13.0	8.9
			12/14	7	2.3	20.0	14.7
			12/29	18	5.7	25.3	21.7
			1/14	27	6.9	40.3	29.0
			1/28	17	6.3	39.8	37.0
Stevens Pass Sand Shed	21B45	3700	12/29	11	2.9	16.6	-
			1/14	19	3.3	28.0	-
			1/28	6.8	2.3	30.0	-

COLOCKUM CREEK

Colockum Creek Upper	20B22	5300	1/27	0	0.0	3.2	-
Colockum Creek Lower	20B23	4300	1/27	0	0.0	3.2	-
Trough # 2	20B25SP	5310	1/27	0	0.0	-	-

SQUILCHUCK CREEK

Beehive Springs	20B03	4400	1/28	0	0.0	1.7	6.6
Scout-A-Vista	20B04	3400	1/28	Trace	0.0	4.2	6.5

STEMILT CREEK

Jump-Off	20B08	4450	1/27	0	0.0	3.4	6.7
Stemilt Slide	20B06	5000	1/27	0	0.0	8.6	12.4
Upper Wheeler	20B07	4400	1/29	0	0.0	3.1	8.3

YAKIMA RIVER

Ahtanum R. S.	21C11	3100	12/27	0	0.0	1.0	3.1
			1/24	Trace	0.0	2.2	6.3
Blewett Pass No. 2	20B02	4270	12/28	0	0.0	4.6	6.7
			2/1	0	0.0	10.1	13.0
Bumping Lake Old	21C08	3450	12/29	0	0.0	3.7	7.1
			1/28	0	0.0	8.7	13.2
Bumping Lake New	21C36	3400	12/29	0	0.0	5.6	8.7
			1/28	0	0.0	12.7	18.3
Cayuse Pass	21C06	5300	12/27	22	4.3	35.0	33.2
			1/26	21	7.9	61.2	58.7
Colockum Pass	20B09	5370	1/31	0	0.0	10.9	11.2
Cooke Creek	20B10	4123	1/31	0	0.0	0.0	7.2

Average based on 1958-72 average

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

YAKIMA RIVER (Cont.)

Corral Pass	21B13	6000	1/28	12	4.2	30.1	-
Grouse Camp	20B11	5385	1/31	0	0.0	9.9	12.1
High Creek	20B12	2930	1/31	0	0.0	5.7	4.9
Joe Lake +	21B46a	4624	1/27	36	13.4	58.8	-
Green Lake	21C10	6000	1/24	7.5	2.3	23.0	-
Lake Cle Elum	21B14M	2200	11/26	Trace	0.0	0.0	1.1
			1/4	2.2	0.4	4.8	4.2
			1/14	5	0.8	10.4	6.5
			1/28	0	0.0	8.3	8.2
Lemah Creek +	21B47a	3327	1/27	16	6.1	33.6	-
Manashtash	20C01	3935	1/30	0	0.0	0.0	3.9
Morse Lake	21C17	5400	1/27	13	3.0	36.7	39.4
Nanum	20B13	3875	1/31	0	0.0	6.2	7.8
Olallie Meadows	21B02	3625	1/27	13	0.8	32.0	32.7
Satus Pass	20D01	4030	1/28	0	0.0	1.8	8.7
Stampede Pass SP	21B10	3860	12/31	-	3.6	23.2	16.5
			1/15	-	4.2	38.5	22.0
			2/1	-	2.0	38.4	28.7
Trail Creek	20B14	3360	1/31	0	0.0	0.0	2.3
Tunnel Avenue	21B08	2450	11/29	Trace	0.0	3.0	2.7
			1/3	4.9	1.0	6.2	9.2
			1/14	11	2.6	16.5	11.3
			1/28	4.2	1.2	15.7	17.6
Van Epps Pass +	20B26a	5925	1/27	27	10.3	41.6	-
Walters Flat	20B15	3360	1/31	0	0.0	5.4	6.3
Waptus Lake +	21B49a	3024	1/27	18	6.9	33.6	-
White Pass (E. Side)	21C28	4500	1/28	0	0.0	12.7	18.2

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	12/27	0	0.0	1.0	3.1
			1/24	Trace	0.0	2.2	6.3
Green Lake	21C10	6000	1/24	7.5	2.3	23.0	-

LOWER COLUMBIA DRAINAGEASOTIN CREEK

Spruce Springs	17C04	5700	1/21	12	2.4	18.8	19.3
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MILL CREEK

Homestead	17C01	4030	1/26	2.1	0.6	5.9	6.5
Martin Springs	17C02	4400	1/26	7	1.6	9.8	9.8
Tollgate	18D03M	5070	1/27	17	4.0	20.7	16.7

Average based on 1958-72 average

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 7

SNOW	DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
	NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
							Last Year	Average ^t #

KLICKITAT RIVER

Status Pass	20D01	4030	1/28	0	0.0	1.8	8.7
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WHITE SALMON RIVER

Cultus Creek	21C12	4000	12/27	7	2.7	12.9	17.8
			1/26	10	3.4	23.3	32.5
Surprise Lakes	21C13A	4250	12/27	7	3.0	12.3	20.1
			1/26	12	4.2	23.5	35.9

WIND RIVER

Old Man Pass	21D19	3100	12/27	0	0.0	0.9	7.5
			1/26	0	0.0	6.0	14.7

LEWIS RIVER

Blue Lake +	21C22a	4800	12/27	20	8.0	28.7	34.5
			1/26	22	7.7	53.2	60.5
Bob's Trail	21C21	2200	12/28	0	0.0	2.0	6.5
			1/26	0	0.0	7.4	12.0
Calamity Ridge +	22D01a	2500	12/27	0	0.0	1.6	3.9
			1/26	0	0.0	1.4	5.6
Council Pass +	21C18	4200	12/27	10	4.3	11.1	18.6
			1/26	8	2.8	26.2	29.7
Cultus Creek	21C12	4000	12/27	7	2.7	12.9	17.8
			1/26	10	3.4	23.3	32.5
Divide Meadow +	21C29a	5600	12/27	12	4.8	22.8	27.5
			1/26	14	5.0	41.0	42.3
Grand Meadow	21C25	3500	12/27	Trace	0.0	6.1	10.5
			1/26	Trace	0.0	13.9	19.4
Lone Pine Shelter	21C26	3800	12/27	4	1.3	13.8	17.0
			1/26	3.6	1.3	23.2	30.5
Marble Mountain +	22C05a	3200	12/27	Trace	0.0	0.7	12.7
			1/26	0	0.0	9.2	28.7
New Muddy River	22C06	2000	12/28	0	0.0	1.0	6.4
			1/26	0	0.0	4.4	12.1
Old Man Pass	21D19	3100	12/27	0	0.0	0.9	7.5
			1/26	0	0.0	6.0	14.7
Plains of Abraham +	22C01a	4400	12/28	6	2.7	20.3	28.8
			1/26	8	2.9	30.0	45.2
Smith Creek Road	22C04	2100	12/27	0	0.0	0.8	9.5
			1/26	0	0.0	6.3	15.7
Spencer Meadow +	21C20a	3400	12/27	1	0.3	2.9	10.2
			1/26	0	0.0	7.9	17.9
Surprise Lakes	21C13A	4250	12/27	7	3.0	12.3	20.1
			1/26	12	4.2	23.5	35.9

+ Water equivalent estimated from aerial stadia observation

Average based on 1958-72 average

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 8

SNOW				THIS YEAR			PAST RECORD	
	DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
	NAME	Number	Elevation				Last Year	Average #

LEWIS RIVER (Cont.)

Table Mountain +	21C24a	4200	12/27	10	4.3	13.3	21.4
			1/26	6	2.1	28.7	34.8
Timbered Peak +	21D18a	3000	12/27	0	0.0	2.2	8.0
			1/26	0	0.0	3.3	14.3

COWLITZ RIVER

Cayuse Pass	21C06	5300	12/27	22	4.3	35.0	41.3
			1/26	21	7.9	61.2	58.7
Plains of Abraham +	22C01a	4400	12/28	6	2.7	20.3	28.8
			1/26	8	2.9	30.0	45.2

White Pass (E. Side) 21C28 4500 1/28 0 0.0 12.7 18.2

P U G E T S O U N D D R A I N A G EWHITE RIVER

Cayuse Pass	21C06	5300	12/27	22	4.3	35.0	41.3
			1/26	21	7.9	61.2	58.7
Corral Pass	21B13	6000	1/28	12	4.2	30.1	-
Morse Lake	21C17	5400	1/27	13	3.0	36.7	39.4

GREEN RIVER

Airstrip	21B24	1800	12/27	0	0.0	0.0	2.5
			1/26	0	0.0	7.6	4.9
Charley Creek	21B25	1200	12/27	0	0.0	0.0	1.6
			1/26	0	0.0	0.0	1.5
Cougar Mountain	21B42SP	3200	1/31	0	0.0	7.7	-
Grass Mtn. No. 2	21B27	2900	12/27	0	0.0	2.7	7.6
			1/26	0	0.0	6.7	15.3
Grass Mtn. No. 3	21B28	2100	12/27	0	0.0	0.3	2.6
			1/26	0	0.0	3.3	5.3
Lester Creek	21B29	3100	12/27	6.3	1.1	8.0	9.7
			1/26	8.4	2.0	17.4	17.8
Lynn Lake	21B50	4000	12/27	4.2	0.9	1.1	-
			1/26	0	0.0	8.7	-
Sawmill Ridge	21B31	4700	12/27	12	2.2	15.8	15.2
			1/26	11	3.7	29.0	28.6
Snowshoe Butte	21B43SP	5000	1/26	16	3.5	33.3	-
Stampede Pass SP	21B10	3860	12/31	-	3.6	23.2	16.5
			1/15	-	4.2	38.5	22.0
			2/1	-	2.0	38.4	28.7
Twin Camp	21B30	4100	12/27	7.5	1.8	7.7	11.3
			1/26	4.8	1.7	16.8	17.6

Average based on 1958-72 average

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 9

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD		
	NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)
				Last Year	Average #	

SNOQUALMIE RIVER

Olallie Meadows	21B02	3625	1/27	13	0.8	32.0	32.7
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SKYKOMISH RIVER

Stevens Pass	21B01	4070	12/15	7	2.3	20.0	14.7
			12/29	18	5.7	25.3	21.7
			1/14	27	6.9	40.3	29.0
			1/28	17	6.3	39.8	37.0
Stevens Pass Sand Shed	21B45	4070	12/29	11	2.9	16.6	-
			1/14	19	3.3	28.0	-
			1/28	6.8	2.3	30.0	-

SKAGIT RIVER

Beaver Creek Trail	21A04	2200	1/27	1.9	0.5	12.0	-
Beaver Pass	21A01	3680	1/27	4.2	1.4	23.6	-
Brown Top Ridge +	21A28a	6000	1/26	41	13.6	60.8	-
Cloudy Pass +	20A22a	6500	2/1	Not Measured	39.3	29.0	
Devils Park	20A04	5900	1/26	30	8.7	45.5	31.9
Freezeout Creek Trail	20A01	3500	1/26	3.8	0.9	9.8	-
Freezeout Meadows New	20A38	5000	1/26	26	7.4	28.3	-
Granite Creek	21A29A	3500	1/26	15	3.1	19.2	-
Harts Pass	20A05A	6500	1/26	32	9.7	43.7	32.7
Klesilkwa	35B-Can	3700	1/31	1.2	0.3	-	10.4*
Lyman Lake	20A23A	5900	2/1	Not Measured	50.2	42.1	
Meadow Cabins	20A08	1900	1/26	0	0.0	7.8	-
New Hozomeen Lake	21A30	2800	1/26	2.3	0.8	8.7	-
New Tashme	26A-Can	2500	2/1	Late Report	9.8	8.7*	
Rainy Pass	20A09	4780	1/26	27	7.7	38.7	29.5
Thunder Basin	20A07	4200	1/26	11	3.0	14.3	-

BAKER RIVER

Baker Pass +	21A27a	4900	11/1	10	3.0	-	-
			11/29	14	4.0	26.0	-
			12/28	40	14.0	40.0	-
			1/28	48	19.0	67.0	-
Dock Butte +	21A11A	3800	11/1	2	1.0	-	-
			11/29	5	2.0	16.0	-
			12/28	9	4.0	26.0	-
			1/28	10	4.0	50.0	44.8
Easy Pass +	21A7A	5200	11/1	6	2.0	-	-
			11/29	5	2.0	20.0	-
			12/28	28	10.0	44.0	-
			1/28	28	11.0	-	53.9

Average based on 1958-72 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 10

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #

BAKER RIVER (Cont.)

Jasper Pass +	21A06A	5400	11/1	6	2.0	-	-
			11/29	6	2.0	30.0	-
			12/28	54	19.0	51.0	-
			1/28	34	14.0	81.0	65.7
Marten Lake	21A09A	3600	11/1	2	1.0	-	-
			11/29	5	2.0	26.0	-
			12/28	28	11.0	38.0	-
			1/28	36	14.0	65.0	52.2
Mt. Blum +	21A18a	5800	11/1	6	2.0	-	-
			11/29	12	4.0	18.0	-
			12/28	32	11.0	41.0	-
			1/28	28	11.0	-	42.5
Panorama New	21A26	4300	1/15	33	9.6	41.6	-
			1/30	19	7.5	48.2	-
Rocky Creek	21A12A	2100	11/1	0	0.0	-	-
			11/29	0	0.0	7.0	-
			12/28	0	0.0	10.0	-
			1/28	0	0.0	21.0	21.5
Schreibers Meadow	21A10A	3400	11/1	0	0.0	-	-
			11/29	2	1.0	14.0	-
			12/28	10	4.0	24.0	-
			1/28	6	2.0	34.0	39.9
S. F. Thunder Creek +	21A14A	2200	11/1	0	0.0	-	-
			11/29	0	0.0	1.0	-
			12/28	0	0.0	2.0	-
			1/28	0	0.0	13.0	7.4
Watson Lakes	21A08A	4500	11/1	3	1.0	-	-
			11/29	5	2.0	14.0	-
			12/28	25	10.0	22.0	-
			1/28	22	9.0	40.0	42.9

NOOKSACK RIVER

Glacier Creek	21A23	3700	12/2	0	0.0	-	-
			1/1	7.8	0.9	-	-
			1/31	0	0.0	-	-
Panorama New	21A26	4300	1/15	33	9.6	41.6	-
			1/30	19	7.5	48.2	-

O L Y M P I C P E N I N S U L ADUNGENESS RIVER

Deer Park	23B04	5200	1/27	0	0.0	-	-
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Average based on 1958-72 average

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1977 - APPENDIX 11

SNOW				THIS YEAR		PAST RECORD	
	DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year
NAME	Number	Elevation					

MORSE CREEK

Cox Valley	23B14	4500	1/28	0	0.0	25.2	-
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ELWHA RIVER

Hurricane	23B03	4500	1/28	0	0.0	12.3	16.7
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Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*



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with the Snow Survey"*